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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/619,391	07/19/2000	Roman Schertler	622/40901C2	2663

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[REDACTED] EXAMINER

JIMENEZ, MARC QUEMUEL

[REDACTED] ART UNIT

[REDACTED] PAPER NUMBER

3726

DATE MAILED: 10/03/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

S.M.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/619,391	SCHERTLER, ROMAN
	Examiner Marc Jimenez	Art Unit 3726

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on 10 July 2002.
- 2a) This action is **FINAL**.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.
- 4) Claim(s) 35-54 and 72 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 35-54 and 72 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.      4) Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.  
 5) Notice of Informal Patent Application (PTO-152)  
 6) Other:

## DETAILED ACTION

### *Preliminary Amendment*

1. The preliminary amendment filed 4/18/2001 is improper because the requested change to the specification was not underlined (see page 2, section 11 of the preliminary amendment filed 4/18/2001). Applicant is requested to resubmit the changes to the specification as underlined.

### *Claim Objections*

2. **Claim 35** is objected to because of the following informalities: in line 6 “each other to” should be - - each other - -. Appropriate correction is required.

### *Claim Rejections - 35 USC § 112*

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. **Claim 72** is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 72 recites “said treatment chamber” in the last line which lacks proper antecedent basis.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. **Claim 35-38, 49, 50, and 72** are rejected under 35 U.S.C. 102(b) as being anticipated by Toshimasa (JP 3-109727).

With respect to Claims 35-38, 49, and 50, Toshimasa teaches a vacuum process apparatus for processing at least one workpiece comprising: a chamber 1 with two openings 5,3 defining respective opening areas, and a transport device with the vacuum chamber 1 having a drive shaft 65, two conveyors 62,64 for at least one workpiece each, and a transport arm 60a for each conveyor 62,64 mounted opposite each other and projecting from the drive shaft 65, the arms 60a being operatively coupled to the conveyors 62,64 to move the conveyors 62,64 independently of each other with a radial component relative to the drive shaft.

Note that the openings 5,3 define an opening area each, with normals on the opening areas being rectangularly arranged with respect to the rotational axis 65, the conveyors 62,64 are movable normally with respect to the drive shaft 65, the conveyors 62,64 are movable towards and from the opening 5,3 in a normal direction of the opening areas, the two conveyors 62,64 are linearly movable towards and from the axis by respective drives provided at the respective arms 60a.

With respect to Claim 72, Toshimasa teaches a method for manufacturing at least two workpieces, comprising the steps of: providing a vacuum chamber **1** with two openings **5,3** defining respective opening areas **5,3** providing a transport device having a drive shaft **65** rotatable around a rotational axis of the drive shaft **65**, providing two conveyors **62,64** for at least one workpiece each and a transport arm **60a** for each conveyor **62,64** mounted opposite each other to and projecting from the drive shaft **65**, the arms **60a** being operatively coupled to the conveyors **62,64** to move the conveyors **62,64** independently of each other relative to the drive shaft **65**, applying a workpiece to each of the conveyors **62,64**, providing at one of the two openings **5,3** a treating station, rotating the transport device and therewith the workpieces by 180 degrees so as to align each of the workpieces with one of the openings **5,3**, moving the conveyors **62,64** with the workpieces by the respective arms **60a** towards the two openings **5,3** and treating one of the two workpieces at the one of the openings **5,3** by the treatment chamber.

7. **Claims 52-54** are rejected under 35 U.S.C. 102(b) as being anticipated by Shertler (3,915,117).

Shertler teaches a vacuum chamber **2** for processing at least one workpiece, comprising two openings **15,16** defining respective opening areas, a transport device **3** with a drive shaft **4** for rotating the transport device **3** around a rotational axis of the drive shaft **4**, two conveyors **9,5** and a transport arm **24** (see the structure above numeral **54** in fig. 1 for another transport arm) for each conveyor **9** (see the conveyor structure **9** above the numeral **16** and another conveyor structure below numeral **15**) mounted opposite each other to the drive shaft **4** (mounted to each other via **1**) and each being operatively coupled to one of the conveyors **9,5**

to move the conveyors **9** (see the conveyor structure **9** above the numeral **16** and another conveyor structure below numeral **15**) independently of each other relative to the drive shaft **4**.

Note that the normals on the opening areas **15,16** are rectangularly arranged with respect to the rotational axis, and the conveyors **9** (see the conveyor structure **9** above the numeral **16** and another conveyor structure below numeral **15**) are movable normally with respect to the rotational axis.

8. **Claims 35-42, 44, 49, 50, and 72** are rejected under 35 U.S.C. 103(a) as being unpatentable over Helms (4,813,846) in view of Lorenz et al. (5,135,349).

Helms teaches a vacuum process apparatus for processing at least one workpiece, comprising a chamber **35** with two openings **36,39** defining respective opening areas, and a transport device **7a** with the vacuum chamber **35** having a drive shaft rotatable around a rotational axis of the drive shaft, a conveyer **10** for at least one workpiece, and a transport arm **7b** for the conveyor **10** mounted to the drive shaft, the arm **7b** being operatively coupled to the conveyor **10**.

Helms teaches the invention cited above with the exception of having two conveyors, a transport arm for each conveyor mounted opposite each other and projecting from the drive shaft, the arms being operatively coupled to the conveyors to move the conveyors independently of each other with a radial component relative to the drive shaft.

Lorenz et al. teach two conveyors (below **S1,S2**), a transport arm **W1,W2** for each conveyor mounted opposite each other and projecting from the drive shaft **14**, the arms **W1,W2**

being operatively coupled to the conveyors (below **S1,S2**) to move the conveyors independently of each other with a radial component relative to the drive shaft **14**.

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Helms with two conveyors, a transport arm for each conveyor mounted opposite each other and projecting from the drive shaft, the arms being operatively coupled to the conveyors to move the conveyors independently of each other with a radial component relative to the drive shaft, in light of the teachings of Lorenz et al., in order to provide more flexibility in wafer transport (col. 4, lines 5-15 as suggested by Lorenz et al.).

Seals are provided **42** (see fig. 6 of Helms), the conveyors are movable normally with respect top the drive shaft (see fig. 1 of Lorenz et al.) and towards and away form the opening areas, and rotation of the device defines a cone-shaped trajectory surface (see fig. 1 of Lorenz et al.).

9. **Claims 43** is rejected under 35 U.S.C. 103(a) as being unpatentable over Helms in view of Lorenz et al. as applied to **Claim 42** above, and further in view of Schertler.

Helms/Lorenz et al. teach the invention cited above with the exception of having a gas inlet and pumping means.

Schertler teaches a gas inlet and pumping means (col. 3, lines 30-39).

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Helms/Lorenz et al. with a gas inlet and pumping means, in light of the teachings of Schertler, in order to evacuate or deposit gas for processing operations.

10. **Claim 45** rejected under 35 U.S.C. 103(a) as being unpatentable over Helms (4,813,846) in view of Lorenz et al. (5,135,349) as applied to **Claim 44** above, and further in view of Boys et al. (4,795,299).

Helms/Lorenz et al. teach the invention cited above with the exception of the seal member being formed by a conveyor plate.

Boys et al. teach a seal member being formed by a conveyor plate **41**.

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Helms/Lorenz et al. with a seal member formed by a conveyor plate, in light of the teachings of Boys et al., in order to create a leak proof seal between processing stations.

11. **Claims 46-48** are rejected under 35 U.S.C. 103(a) as being unpatentable over Helms in view of Lorenz et al. as applied to **Claim 35** above, and further in view of Lavinsky et al.

Helms/Lorenz et al. teach the invention cited above with the exception of having pin and spring for holding the workpiece.

Lavinsky et al. teach a pin and spring **80,48** for holding a workpiece **12**.

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Helms/Lorenz et al. with a pin and spring, in light of the teachings of Lavinsky et al., in order to secure a workpiece having a hole at the center.

12. **Claim 51** is rejected under 35 U.S.C. 103(a) as being unpatentable over Helms in view of Lorenz et al. as applied to **Claim 50** above, and further in view of Simone (4,632,632).

Art Unit: 3726

Helms/Lorenz et al. teach the invention cited above with the exception of having bellows encapsulating the arms.

Simone teaches bellows 6 encapsulating arms.

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided the invention of Helms/Lorenz et al. with bellows encapsulating arms, in light of the teachings of Simone, in order to protect the arms from debris.

#### *Response to Arguments*

13. Applicant's arguments with respect to **Claims 35-51 and 72** have been considered but are moot in view of the new ground(s) of rejection.

14. Applicant has not addressed the rejections to **Claims 52-54** set forth the last office action, therefore, Applicant's arguments with respect to these claims fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references. The examiner maintains the rejections to Claims 52-54 set forth in the last office action.

#### *Conclusion*

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

***Contact Information***

16. Telephone inquiries regarding the status of applications or other general questions, by persons entitled to the information, should be directed to the group clerical personnel. In as much as the official records and applications are located in the clerical section of the examining groups, the clerical personnel can readily provide status information. M.P.E.P. 203.08. The Group clerical receptionist number is (703) 308-1148.

If in receiving this Office Action it is apparent to applicant that certain documents are missing, e.g., copies of references cited, form PTO-1449, form PTO-892, etc., requests for copies of such papers or other general questions should be directed to Tech Center 3700 Customer Service at (703) 306-5648, or fax (703) 872-9301 or by email to [CustomerService3700@uspto.gov](mailto:CustomerService3700@uspto.gov).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc Jimenez whose telephone number is 703-306-5965. The

examiner can normally be reached on **Monday-Thursday and the second Friday of the bi-week, between 9am-6pm.**

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Greg Vidovich can be reached on 703-308-1513. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9302 for regular communications and 703-872-9303 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1148.

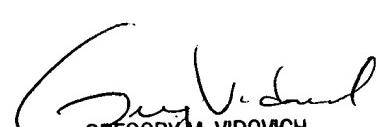
Other helpful telephone numbers are listed for applicant's benefit.

Allowed Files & Publication	(703) 308-6789 or (888) 786-0101
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MJ  
September 24, 2002

  
GREGORY M. VIDOVICH  
PRIMARY EXAMINER